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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/036,458	03/06/1998	MARIE ANGELOPOULOS	YO998-086	5986
7590 08/19/2004				
THOMAS A. BECK		EXAMINER		
26 ROCKLEDGE LANE		YOON, TAE H		
NEW MILFORD, CT 06776				
		ART UNIT	PAPER NUMBER	
		1714		

DATE MAILED: 08/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/036,458	Applicant(s) ANGELOPOULOS ET AL.	
	Examiner Tae H Yoon	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Figure 1c is objected since the left bracket contains N with two negative valences and N with a positive and a negative valences and A with a negative valence.

Figure 1b is also objected since the right bracket contains two groups having positive and negative valences different from each other and the positions of "+" and "-" for valences are confusing.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5, 8, 9, 11-19, 21, 22 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This is NEW MATTER rejection since newly recited "conjugated polymer system" does not have support in the originally filed specification and applicant failed to point out any support for it.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 4, 6, 7, 10, 12, 14, 15, 19, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited "synthesizing said polymer" of claim 4 is confusing and improperly broadens the scope of claim 1 wherein a polymer is recited.

The recited method claims 6, 7, 10 and 20 are incomplete and indefinite since it is unclear what is obtained by the recited method. Is it a solution or a solid?

Improper Markush language is recited in claim 12 and an insertion of "and" before "pentafluorovinyl ether" of the last line is needed. The recited "an amides of such a fluorine containing carboxylic acid" is confusing with respect to the fluorine containing carboxylic acid. The recited "hexamethylene" is not a fluorinated solvent. The recited range (such as various fluoro-(meth)acrylates in lines 2-10 from the bottom) with in a range (fluorinated acrylates and methacrylates in line 11 from the bottom) is indefinite, and a separate claim with such narrow limitation is suggested. The recited "perfluorobutyl acrylate in line 4 from the bottom is incorrect.

The recited formula in claim 14 is confusing since the left bracket contains N with two negative valences and N with a positive and a negative valences and A with a negative valence. Also, the recited "wherein $x \geq$ has a value of from about 0 to about 1" does no make sense since said formula does not contain x, and a definition for y is missing.

The recited " Q^+ is a cation and A_{\geq} is anion" in claim 15 is confusing since said formula does not contain Q^+ and A_{\geq} .

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It is unclear as to when the recited blending occurs in claim 19.

The recited range within a range, "and so on such as anisole, benzyl alcohol ----- and pentanones" in claim 21 is indefinite, and a separate claim with such narrow limitation is suggested.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7, 10, 13-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0315514.

EP teaches the instant polymerization of aniline in the presence of mixed fluorinated solvents in abstract. The acid doped polyaniline inherently meets the

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formula of claim 14, and undoped polyaniline inherently meets the formula of claim 15.

Thus, the instant invention lacks novelty.

Claims 1-7, 9, 10, 13-18 are rejected under 35 U.S.C. 103(a) as obvious over EP 0315514.

The instant invention further recites a concentration of polyaniline in a solvent over EP.

However, it would have been obvious to one skilled in the art at the time of invention to adjust a concentration of polyaniline in a solvent in EP since EP teaches a solution.

Claims 1-4, 6, 7, 10-12, 16-19 and 22-24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ikenaga et al (US 4,772,421).

Ikenaga et al teach the instant polymerization and blend with a resin and a method of making an article such as film in examples 6-12. Various conductive precursors and polymers are taught at col. 3, lines 8-21. Thus, the instant invention lacks novelty.

Claims 1-4, 6, 7, 9-19 and 22-24 are rejected under 35 U.S.C. 103(a) as obvious over Ikenaga et al (US 4,772,421) in view of Tan (US 5,863,658) or EP 0315514.

The instant invention further recites a solution concentration of less than 5% and polyaniline over Ikenaga et al. However, polyaniline is one of the art well known conducting polymer as taught by Tan and EP.

It would have been obvious to one skilled in the art at the time of invention to adjust a concentration in a solvent of Ikenaga et al since Ikenaga et al teach a solution, and further to utilize the art well known (poly)aniline of Tan or EP in Ikenaga et al since Ikenaga et al teach employing various conductive precursors and polymers.

Claims 1, 3, 4, 11-15, 17, 19 and 22-24 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tan (US 5,863,658).

Tan teaches films obtained from polyaniline at col. 1, lines 55-62. Tan also teaches that the doped polyaniline is soluble in hexafluoroisopropanol and that blends of polyaniline and various thermoplastics and elastomers with controllable conductivity can be obtained at col. 1, line 63 to col. 2, line 6. Thus, the instant invention lacks novelty.

Claims 1-4, 9, 11-15, 17-19 and 22-24 are rejected under 35 U.S.C. 103(a) as obvious over Tan (US 5,863,658).

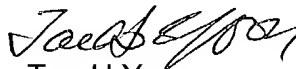
The instant invention further recites a concentration of polyaniline in a solvent over Tan.

However, it would have been obvious to one skilled in the art at the time of invention to adjust a concentration of polyaniline in a solvent in Tan since Tan teaches a solution.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Tae H Yoon
Primary Examiner
Art Unit 1714

THY/August 9, 2004